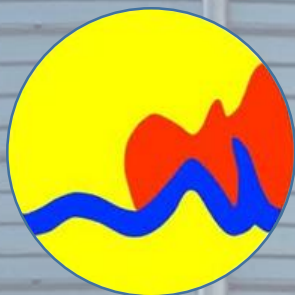


Grand Rapids Water & Sewer Systems

44th Annual Preliminary Rate Study

2020

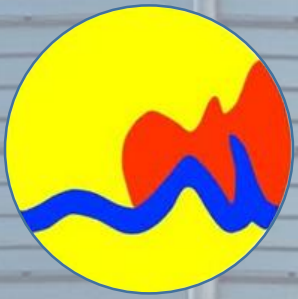


Historical Rate Changes

Rate Study Year	Water Supply System			Sewage Disposal System		
	Revenue Requirements	% change in RR over prev year	% gross rate incr (decr) **	Revenue Requirements	% change in RR over prev year	% gross rate incr (decr) **
2005	\$ 37,329,089	6.07%	5.94%	\$ 36,283,756	12.64%	12.76%
2006	39,629,260	6.16%	0.63%	38,301,107	5.56%	4.94%
2007	40,270,271	1.62%	4.95%	42,742,825	11.60%	15.73%
2008	42,017,680	4.34%	2.45%	47,092,925	10.18%	14.69%
2009	42,939,752	2.19%	9.89%	51,378,424	9.10%	14.04%
2010	41,200,107	-4.05%	-6.27%	49,673,390	-3.32%	-3.30%
2011	41,802,404	1.46%	5.15%	50,082,541	0.82%	2.89%
2012	39,247,442	-6.11%	-4.41%	48,183,681	-3.79%	-2.46%
2013	38,646,748	-1.53%	-4.30%	48,946,212	1.58%	2.46%
2014	40,055,985	3.65%	2.50%	49,962,043	2.08%	2.81%
2015	40,178,439	0.31%	1.00%	49,868,027	-0.19%	0.30%
2016	41,187,517	2.51%	3.63%	50,400,344	1.07%	0.36%
2017	42,828,972	3.99%	2.45%	52,319,981	3.81%	3.08%
2018	43,868,464	2.43%	2.71%	54,611,300	4.38%	3.28%
2019	45,752,997	4.30%	2.47%	56,969,417	4.32%	3.49%
2020*	45,501,943	-0.55%	0.62%	61,242,290	7.50%	7.92%
AVG	41,403,567	1.67%	1.84%	49,253,641	4.21%	5.19%

* Revenue Requirements per the 2020 Preliminary Rate Study.

** The percentage gross rate increase (decrease) differs from the annual percentage change in Revenue Requirements due to differences in usage volumes/customers/application of Circuit Breaker.



Building Blocks of the Revenue Requirement

**Revenue Credits
(Other Operating
Revenue)**

Billed Volume

**City and Customer
Community Circuit
Breaker (CCCCB)
(Penalty Revenue)**

REVENUES

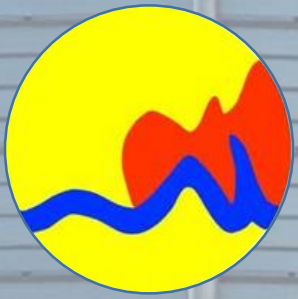
**Operating and
Maintenance
Expense**

**Assets:
Depreciation
& Return on
Investment (ROI)**

**Other Misc. Items:
Combined Sewer
Overflow (CSO) &
Payback Agreements**

EXPENSES

RATE CHANGES

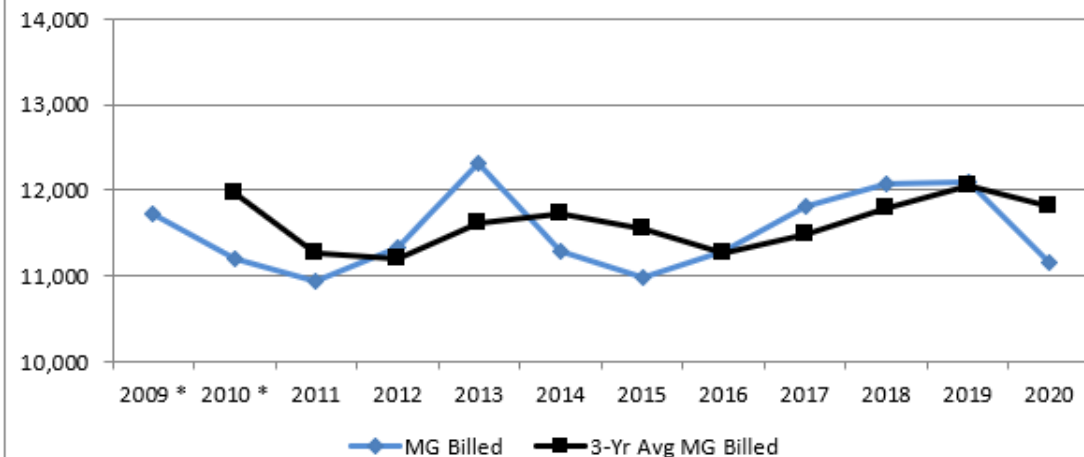


Billed Volume Average – Revenue Expectation

- 2020 Water volume down (7.89%) over 2019
- 3-Yr Avg Water volume **down** by (2.02%)

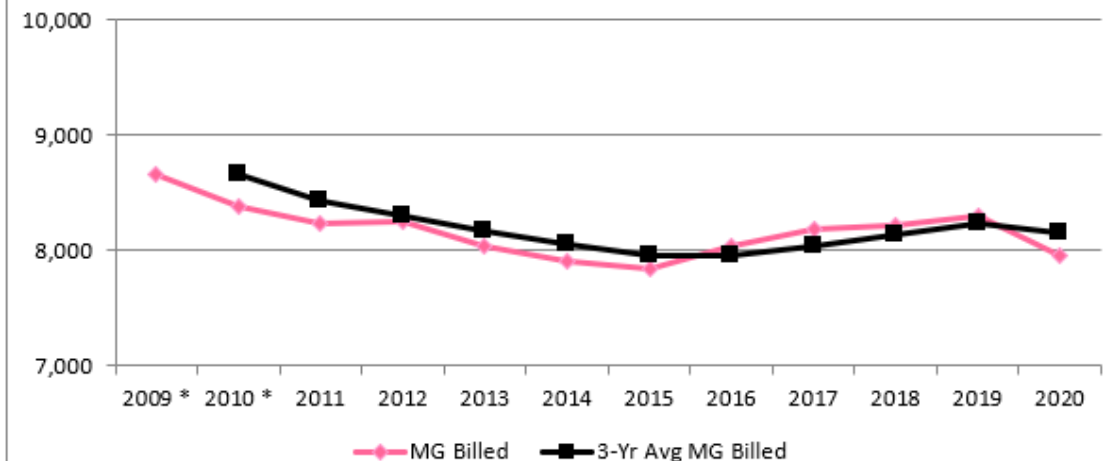
- 2020 Sewer Volume down (4.12%) over 2019
- 3-Yr Avg Sewer Volume **down** (0.84%)

2020 Preliminary Rate Study - Water Supply System
Million Gallons Billed

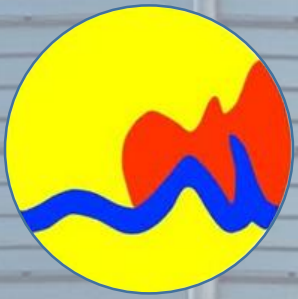


* Volumes were restated from these Rate Studies to reflect actual billings without adjustment for accrued revenues.

2020 Preliminary Rate Study - Sewage Disposal System
Million Gallons Billed

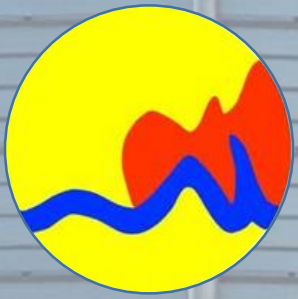


* Volumes were restated from these Rate Studies to reflect actual billings without adjustment for accrued revenues.



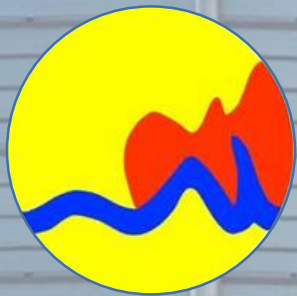
Rate Impact Factors - Water

2020 Water Rate Study Rate Drivers	% Impact
Increases:	
Billed Volume	1.18%
Other Operating Revenue (permits, fees, etc.)	0.26%
Circuit Breaker Credit (penalty revenue)	0.23%
Assets – ROI and Depreciation (LMFP work)	0.18%
Decreases:	
O&M – Reduction in Construction in Progress Personnel, Supplies, Other Services down	(1.17%)
Integrated Connection Fees	(0.06%)
Proposed Rate Increase	0.62%



Rate Impact Factors - Sewer

2020 Sewer Rate Study Rate Drivers	% Impact
Increases:	
Assets – ROI and Depreciation (\$45M Biodigester Preload, Admin and Lab Renovation)	5.62%
O&M – Construction in Progress (DTE & Consumers) Ash Lagoon Remediation – EGLE mandate Biodigester Project Related CSX Soil Contamination Study WRRF Plant Work	1.91%
Billed Volume - 3-Yr Avg Sewer Volume down	0.39%
CSO Debt Service Requirement (GR Only)	0.38%
Decreases:	
Other Operating Revenue (permits, fees, etc.)	(0.13%)
Circuit Breaker Credit (penalty revenue)	(0.13%)
Connection Fees and Surcharge Revenues	(0.12%)
Proposed Rate Increase	7.92%



Biodigester Project Update

Project Budget	
Biodigester	\$56,806,303
RNG	14,842,449
Phosphorus	6,548,916
Consumers	1,074,840
Engineering	5,266,340
Total	\$84,538,848
*October 2019 Budget was \$85,327,083, resulting in a (\$788,235) budget reduction as bids finalized	

What has not changed

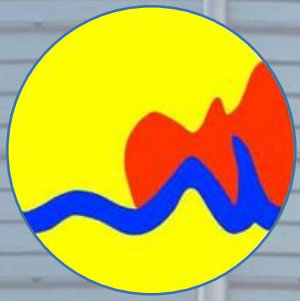
- Renewable energy and sustainability benefits remain strong
- Less costly than alternatives and those alternatives did not produce renewable energy and sustainability benefits

October 2020 Updates

- Market conditions
 - RINs market price rebounds to \$1.42 per gallon
 - All bids finalized
 - Timing of project completion and generated revenue delayed due to COVID19. *Schedule of completion:
 - Tank 2 – November 2020
 - Tank 1 – January 2021
 - CW Tank (Tank 3) – February 2021
 - RNG – Fall 2020
 - Phosphorus Recovery – Fall 2020

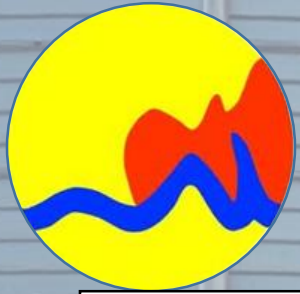
Phasing of rates

- RS19 phased in \$30 Million for ~3.49% rate increase with an 8% increase estimated for CY21
- RS20 phases in \$45 Million ~5% rate increase
- Retains debt coverage around 1.40x (maintains bond ratings)
- Rates can be mitigated by proven operation cost control efforts
- Projected rate savings in future years from Biodigestion system revenue



Circuit Breaker Calculation

	Water/Sewer
City & Customer Community Circuit Breaker (CCCCB): Penalty Revenue (87.5%)*	\$609,928
Individual Circuit Breaker (ICB):	
Penalty Revenue (12.5%)	87,132
Other Non-op Revenue	80,000
Total ICB	\$167,132
Total Circuit Breaker Funds	\$777,060
*CCCCB funds used in 2020 Rate Study	\$609,928



Prelim 2021 Rate Impact by Community

Retail Communities: charges assessed directly to User based on water consumption (except for Wright Twp – REUs). Readiness to Serve (RTS) based on meter size and Commodity based on volume. City of GR maintains assets and bills users directly.

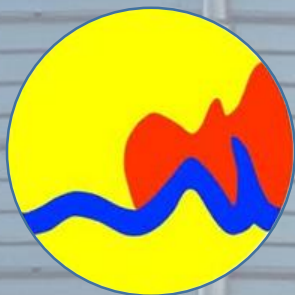
Wholesale Communities: charges assessed directly to Wholesale Community based on water consumption measured through a master meter at the point of service in the customer community. Readiness to Serve (RTS) based on non-integrated system requirements and Commodity based on volume. Customer community maintains assets and bills users directly.

	WATER (1)		SEWER (1)	
	AMOUNT	PERCENT	AMOUNT	PERCENT
RETAIL COMMUNITIES				
GRAND RAPIDS	\$ (12,430)	-0.05%	\$ 2,607,909	6.75%
WALKER	42,708	1.21%	436,778	8.91%
KENTWOOD	54,306	1.21%	515,546	11.62%
CASCADE TWP	(167,913)	-4.51%	284,906	10.99%
GRAND RAPIDS TWP	29,795	1.20%	216,496	8.14%
TALLMADGE TWP	(25,517)	-11.25%	(17,120)	-3.66%
WRIGHT TWP	N/A	N/A	26,685	9.09%
WHOLESALE COMMUNITIES				
EAST GRAND RAPIDS	30,955	3.81%	215,954	21.76%
ADA TWP	115,036	9.13%	129,273	9.42%
OTTAWA COUNTY	213,412	10.78%	NA	NA
GAINES TWP	N/A	N/A	37,343	16.70%
CALEDONIA TWP	N/A	N/A	41,281	27.03%
SYSTEM	\$ 280,352	0.62%	\$ 4,495,051	7.92%

(1) Change in revenue requirements based on revenues currently generated from rates, customer base and volumes reported in the preliminary rate study (Includes consideration for relief from CCCCBB).

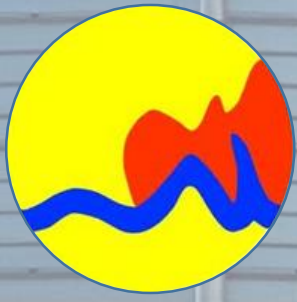
DISCLOSE RELIEF PROVIDED BY CITY & CUSTOMER COMMUNITY CIRCUIT BREAKER (CCCCBB)

	WATER		SEWER	
	AMOUNT	PERCENT	AMOUNT	PERCENT
SYSTEM REVENUE REQUIREMENT	\$ 45,501,943	0.62%	\$ 61,242,290	7.92%
ADD: CCCCBB RELIEF	260,317	0.58%	349,611	0.62%
SYSTEM CHANGE- WITHOUT RELIEF	<u>\$ 45,762,260</u>	<u>1.20%</u>	<u>\$ 61,591,901</u>	<u>8.54%</u>



Prelim 2021 Quarterly Bill by Community

	APPROXIMATE QUARTERLY BILL		CHANGE	
	2020	2021	DOLLARS	PERCENT
GRAND RAPIDS				
WATER	\$ 87.24	\$ 86.89	\$ (0.35)	-0.40%
SEWER	122.20	128.90	6.70	5.48%
	<u>\$ 209.44</u>	<u>\$ 215.79</u>	<u>\$ 6.35</u>	3.03%
BASE RATIO	1.00	1.00		
WALKER				
WATER	\$ 86.68	\$ 87.35	\$ 0.67	0.77%
SEWER	138.99	150.81	11.82	8.50%
	<u>\$ 225.67</u>	<u>\$ 238.16</u>	<u>\$ 12.49</u>	5.53%
RATIO TO GR	1.08	1.10		
KENTWOOD				
WATER	\$ 89.18	\$ 89.64	\$ 0.46	0.52%
SEWER	76.44	84.20	7.76	10.15%
	<u>\$ 165.62</u>	<u>\$ 173.84</u>	<u>\$ 8.22</u>	4.96%
RATIO TO GR	0.79	0.81		
CASCADE TWP				
WATER	\$ 133.11	\$ 126.59	\$ (6.52)	-4.90%
SEWER	153.88	169.76	15.88	10.32%
	<u>\$ 286.99</u>	<u>\$ 296.35</u>	<u>\$ 9.36</u>	3.26%
RATIO TO GR	1.37	1.37		
GRAND RAPIDS TWP				
WATER	\$ 103.04	\$ 103.98	\$ 0.94	0.91%
SEWER	134.53	144.99	10.46	7.78%
	<u>\$ 237.57</u>	<u>\$ 248.97</u>	<u>\$ 11.40</u>	4.80%
RATIO TO GR	1.13	1.15		
TALLMADGE TWP				
WATER	\$ 90.98	\$ 76.86	\$ (14.12)	-15.52%
SEWER	256.82	247.35	(9.47)	-3.69%
	<u>\$ 347.80</u>	<u>\$ 324.21</u>	<u>\$ (23.59)</u>	-6.78%
RATIO TO GR	1.66	1.50		
* THE COMPARISONS ABOVE ARE BASED ON SYSTEM AVERAGE DOMESTIC CUSTOMER				
QUARTERLY CONSUMPTION OF: WATER- 26.00 UNITS OR 19,448 GALLONS				
SEWER - 19.00 UNITS OR 14,212 GALLONS				
NO. OF MONTHS: 3				



Rate Study Schedule

- **November 6th:** Prelim Rate Study available & 30-day review and comment period open for partner communities
- **November 10th:** Rate Study Presentation to City of Grand Rapids Commission & Initiation of 20 day Public Comment Period
- **November 19th:** Rate Study Presentation to Utility Advisory Board
- **Late November/Early December:** Meetings with Partner Communities
- **December 15th:** Approval of the 2021 Water and Sanitary Sewer System Rates by resolution by the City of Grand Rapids Commission

Rate studies available online at:

<https://www.grandrapidsmi.gov/Government/Departments/Water-System/Water-and-Sewer-Rate-Studies>